INSIDE THE BLACK BOX OF ADMINISTRATIVE COSTS

by Kenneth E. Thorpe

Prologue: *America's pluralistic health care system has been subjected to increasing criticism because it is very costly to administer, particularly when matched with comparable expenses in the health care systems of other industrialized nations. The focus of such cross-national comparisons has been Canada, which administers a universal health insurance plan that is considerably less expensive than the private/public melange that makes up America's approach, although there is no agreement on the differential. Three papers in the Spring 1992 volume of Health Affairs addressed the relative administrative costs of the two systems; that debate continues in the Letters section of this volume. While the debate over administrative costs has continued-gaining far more attention, interestingly, than the other ninety cents or so of every health care dollar spent in the United Stutes-some of the conclusions reached by analysts have been influenced as much by ideology us by analysis, Much less attention has focused on the question: Just what are the expenses that people group so casually under "administrative costs," and what are the implications of reducing or redistributing them in some fashion? To address these questions more thoroughly, The Robert Wood Johnson Foundation convened a conference in February 1992. This paper by Ken Thorpe, which reflects original work of an outstanding nature, was presented at that meeting. Here Thorpe presents a typology of administrative costs throughout the health system and discusses the impact of costs in various sectors on systemwide spending. Such a typology is important, he writes, because "reductions in administrative expenses (assuming one could find them and transfer them) could be used to finance benefits for the uninsured." Thorpe, who holds a doctorate in public policy (RAND Graduate Institute), is on the faculty of the University of North Carolina at Chapel Hill, Department of Health Policy and Administration.*

The level of administrative costs in the U.S. health care system has assumed a central role in the debate over national health reform. Recent studies indicate that administration accounts for up to 24 percent–some $194 billion (1992 dollars)-of total U.S. health spending.[1] In contrast, administration accounts for only 11 percent of spending in Canada. The same studies also point out that administrative expenses of private insurance plans are three times higher than those of either Medicare or Medicaid. Estimated savings accompanying the transition to a single-payer system are thought to exceed $100 billion. This higher level of administrative expenses is traced to the existence of multiple private health plans and growth in the cost management (that is, managed care) industry. The possibility that a universal health care system could save $100 billion of waste and bloat from a burgeoning health care budget has enhanced the prospects of its acceptance in the foreseeable future.

A number of critical assumptions are implicit in comparisons of administrative spending among health plans or between countries. The most critical assumption is that each health plan engages in the same administrative activities and pursues the same goals. Thus the plan with the lowest level of administrative spending is the most efficient, with higher levels representing waste. The basic assumption underlying these comparisons is incorrect, however. Investments in administrative spending produce or support several outputs, including patient care, clinical and health services research, and education. These outputs differ among health plans and health systems. As a result, the range of administrative functions in the U.S. health care system is far broader and more complex than the "paper-shuffling" caricatures drawn in the literature would imply. Hence, simply using the ratio of administrative to total spending to identify the "appropriate" or "efficient" level of administrative spending is misleading. Instead, such comparisons require a typology of the nature of the administrative functions performed, their costs, and the outputs they produce. This paper provides such a typology and thus offers a framework for subsequent inquiry concerning administrative efficiency.

At issue is the true magnitude of administrative costs, how they are measured, what they produce, where they are found, and what opportunities exist for reducing them. My notion of costs relies on the concept of social or economic cost: the value of resources used to produce administrative services as measured by their next-highest-valued alternative use. The opportunity cost of administrative expenses assumes special importance in the policy debate over health care reform; reductions in administrative expenses (assuming one could find them and transfer them) could be used to finance benefits for the uninsured.

What Are Administrative Costs?

Comparison of administrative costs across health plans requires a definition of both administrative services and the output produced by these services in insuring against illness and delivering medical care. Administrative costs comprise transaction-related costs, benefits management, selling and marketing costs (to allow consumers specific choices regarding the level of risk they. bear), and regulatory/compliance costs.[2] These four administrative components cut across the entire health care delivery system. Examining administrative expenses throughout the system is important, because health insurance plans differ in the extent to which they retain administrative functions or pass them on to other sectors. Decisions to use electronic versus paper claims processing, for instance, assign different transaction-related costs to each sector of the delivery system. Exhibit 1 offers examples of these costs.

Health insurance. The purchase of health insurance converts a potentially large, random loss of income to a relatively small, certain one. Thus, one clear output of health insurance is to bear and transfer risk from individuals (who are assumed to bear the cost of insurance even in group plans) to insurers. Substantial economies of scale exist in administrative functions, and each insurer markets a slightly different product. These product differences are revealed in the scope of insurance benefits covered, cost-sharing obligations (that is, efforts to limit total spending), whether the premiums are community or experience rated, and the

Exhibit 1
Administrative Costs. By Function And Sector Of The U.S. Health Care System

Function/ component	Health insurance	Hospitals	Nursing homes	Physicians	Firms	Consumers/ individuals
Transaction - related	Claims processing	Admitting, billing	Admitting, billing	Billing	Tracking employee hires/ terminations	Submitting claims
Benefits management	Statistical analyses, quality assistance, plan design	Management information systems	Management information systems	Management information systems	lnternal analyses	Tracking expenses eligible for reimbursement
Selling and marketing	Underwriting, risk/ premiums, advertising	Strategic planning, advertising	Strategic planning	Advertising	Flexible benefit programs	Search costs
Regulatory/ compliance	Premium taxes, reserve requirements	Waste management	Discharge planning	Licensing requirements	Filing summary plan descriptions, COBRA obligations	Mandated benefit laws

[a] COBRA is the Consolidated Omnibus Budget Reconciliation Act of 1985, which includes provisions for continuation of coverage when an employee leaves a firm.

extent to which the insurer monitors the quality of care provided. Thus, in addition to the pure transfer of risk purchased with insurance, information and service-related products such as claims adjudication (coordination of benefits), efforts to limit spending (development of managed care networks, for instance), and information services are offered. Traditionally, these commodities have been bundled and sold as a package. Over time, competition in the insurance market has resulted in their "unbundling"–that is, each product can be sold separately.

The costs associated with producing these outputs are varied. In addition to pure transaction-related costs of bearing risk, other inputs (costs) are required to produce the diverse services purchased along with the pure transfer of risk (Exhibit 2).

Given the fact that health insurance actually involves a number of products, simple comparisons of administrative expenses across health plans are inherently difficult. All health plans do not produce the same product, so the relative size of their administrative expenses will also differ. In the market for risk bearing, the level of administrative expenses used to produce an insurance product largely depends on the scope of services covered, extent of cost sharing, reliance on managed care, percentage of claims filed electronically, extent of market competition, size of the insurance group, extent of medical underwriting, nature of the

Exhibit 2
Health Insurance Administrative Costs And Outputs

Function/input output		Examples of costs	Influence on administrative costs
Transaction-related	Transfer of various levels of risk from individual employer to insurer	Applications processed Claims processing Billing	Scope of services covered (drugs, home health, ambulatory surgery) Extent of cost sharing and managed care Percent of claims filed electronically or by paper
Benefits management	Support services (for example, coordination of benefits, information services)	Plan design activities Data reporting, analysis Management information systems (MIS)	Extent of local marker competition Sophistication of MIS Reliance on conventional versus prepaid plan
Selling and marketing	Support services	Commissions Medical underwriting/screening	Conventional or self-insured plan Firm size, extent of pooling (whether firm is treated individually) For profit, not-for-profit, or public plan Health status of group, industry
Regulatory/compliance	Support services	Interest credit (reserves) State premium taxes	Public versus private plan and profit status of health plan State premium laws Self-insured versus conventional plan

health plan (for-profit, public, not-for-profit), and public regulation and compliance costs (see Exhibit 2). Thus, simply comparing administrative expenses (per claim, per member, or total payments) across plans confuses product diversity and variation in regulatory treatment with the efficiency with which these outputs are produced.

Measuring the economic costs associated with these outputs is also problematic. Ideally, one would want to collect the incremental social cost associated with each administrative function shown in Exhibit 2.[3] However, because substantial fixed costs exist in the production of health insurance, the accounting allocations, where they exist, are unlikely to coincide with the economic definition of costs. Two simple examples may be illustrative. First, what portion of the salary of the chief executive officer (CEO) of a multiline, commercial insurance company is allocated to the health insurance line? Conceptually, we would like to know the change in the CEO's salary if the firm did not sell health insurance. Second, Part A of the Medicare program is administered by private health plans. Many of the services provided by these fiscal intermediaries use administrative services developed for the private sector. Thus, the marginal cost of contracting with the Medicare program is low relative to the average costs of providing similar services (although the services provided do differ) to the private sector. The marginal/average cost differences between Medicare services and private-sector services complicates comparisons across these programs. At the very least, it is not clear what is being compared.

Differences in administrative costs among health plans. Public and private health plans differ in the degree to which the functions outlined in Exhibits 1 and 2 are performed. Some insurers sell primarily to small groups and individuals. These firms often attempt to tailor insurance policies to meet specific needs and attitudes toward risk. Moreover, because adverse selection is common in the small-group market, resources are used to collect detailed information on the health status of prospective clients. Product diversity represents a benefit, yet it entails a cost.[4] Large firms purchase different services from insurers; some purchase only claims-processing services and bear their own insurance risk (that is, they self-insure); others, often smaller firms, purchase both risk-bearing and claims-processing services.

Small-group insurance accounts for a large portion of administrative expenses. There are several reasons for this. First, the economics of this market increases transaction and selling expenses. The sheer number of small firms (nearly 87 percent of all firms) increases marketing, selling, and search costs. Also, the failure rate of small firms is high-perhaps 35 percent per year. Some industry experts have noted that the average life

span of small firms with insurance is less than twenty-eight months.[5] Small firms also have substantial employee turnover; this increases administrative (and unmeasured) costs to the employer, who must submit individual employment changes each month or quarter to the insurer.

Premium structure also varies among health plans. Experience rating involves greater administrative costs than does pure community rating, because it is more data-intensive. Debate continues, however, over which type of rating is desirable. Those favoring community rating view the resources used to match premiums with expected claims as pure waste. Those favoring experience rating claim that it is more efficient (it does not distort market prices, as does community rating) and may be more equitable. For example, experience rating would charge smokers higher health insurance premiums; community rating would not. Community rating makes insurance more available to high-risk groups by reducing its prices. At the same time, community rating increases prices to low-risk groups, with the result that fewer persons purchase insurance. The net effect on the number of insured persons under a community-rated scheme is not clear.

Along with markets and premium structure, a third area that varies among insurers is the degree of investment they make to control costs and increase quality. Such investments are costly but may reduce total spending. For instance, cost sharing may increase administrative and claims expenses and is included in the price of insurance. Relative to no cost sharing, deductibles also reduce the number of claims submitted to an insurer. In contrast to managed care, deductibles may reduce administrative expenses of the insurer, but they increase out-of-pocket spending for the consumer. Deductibles and coinsurance also reduce total spending, on the order of 20 to 30 percent relative to no cost sharing.[6]

Differences in public and private coverage. Many of the difficulties in comparing administrative costs among private insurers also exist in comparing public and private insurance.[7] Medicare, for example, differs in many important respects from a private health plan. For one, Medicare's benefit package does not cover outpatient prescription drugs, as many private plans do. Also, Medicare is a social insurance program, with eligibility determined primarily by age and a standard benefit package provided to large groups. It has no sales, marketing, or commission costs. Because of the large number of beneficiaries, Medicare is able to take advantage of economies of scale in claims processing and general administrative functions.[8] Medicare Part A is administered by private health plans, using claims processing and auditing systems already in place to serve private insurance clients. In theory, Medicare should be able to purchase computer services, claims processing, and overhead

items on a marginal cost basis. If accounting conventions report average administrative costs for private health plans, this biases the comparison toward Medicare's "apparently" lower administrative costs.

The federal/state Medicaid program occupies a different level of administrative complexity and cost. Responsibilities for administering state Medicaid programs include certifying providers, processing claims, monitoring care provided by facilities, and determining eligibility. Given the complex eligibility requirements, administrative expenses associated with Medicaid are somewhat higher, accounting for an average of 5.1 percent of total spending (Exhibit 3). Given the variation across states in the generosity of the mandatory set of services, reimbursement levels, and the number of optional services provided, it is difficult to compare administrative efficiency in Medicaid across states. Medicaid administers services for a broader range of services, including skilled and intermediate nursing home care, than either private plans or Medicare. Unlike Medicare, Medicaid recipients are eligible for defined

Exhibit 3
Functions Of Private Health Insurance And Magnitude Of Expenses As Percentage Of Incurred Claims

	Private insurance			Public insurance	
	Group size[a]				
Function	Individual	100	Over 10,000	Medicare	Medicaid
Commissions	8.4%	4.3%	3.0%	Low [b]	Low [b]
Various activities	12.5	4.8	0.7	A	-d
Risk and profit	8.5	5.5	1.1	A	0.0%
Claims administration	9.3	4.3	3.0	1.5%	-d
Regulatory costs (net of premium taxes and interest credit)	1.3	0.9	0.6	0.0c	0.0
Total	40.0	18.0	5.5	2.1	5.1

Source: Congressional Research Service, *Insuring the Uninsured Options and Analysis* (October 1988); and U.S. House of Representatives, Committee on Ways and Means, *Overview of Entitlement Programs,* 1991 *Green Book* (Washington, D.C.: U.S. GPO, 1991).

[a] Assumes that each firm receives coverage as a separate group (that is, there is no pooling charge).

[b] Some expenses are incurred within Medicaid to enroll potentially eligible individuals. Medicare carriers entail some costs to receive designation as a fiscal intermediary.

[c]Various activities include salts and marketing; contract and legal work; underwriting and screening for adverse selection; employee communication and client interaction; billing; accounting and data reports; and personnel, accounting, and facilities.

[d] Not available.

[c] Does not include an estimated $294 million (fiscal year 1992) in direct costs within the Health Care Financing Administration (HCFA). Breakouts of Medicare totals are $1.457 billion in total expenses for Medicare contractors (Part A), $1.065 billion for claims processing, and $324 million for payment safeguards and $68 million in productivity investments. Two reasons exist for the relatively low Medicare claims totals: first is the average versus marginal cost issues raised in the text; and second is that 75 percent of Medicare Part A and 42 percent of Part B claims are submitted electronically (The President's Comprehensive Health Reform Program, 6 February 1992, 58)-substantially higher than found among commercial carriers in their private health insurance business.

time periods, with subsequent enrollment dependent on meeting each state's Aid to Families with Dependent Children (AFDC) cash income standard. Fluctuations in the economy may increase or decrease the number of potential eligibles each month. States also employ different accounting periods for determining income eligibility and recertification; some rely on monthly recertification for AFDC, while others use longer time periods. Reliance on shorter time periods to meet AFDC's need standard increases the number of eligibility determinations. For instance, other factors held constant, using an eligibility criterion based on one month's income, versus the previous six months' income, increases the number of eligibility determinations by 7 percent.[9]

Employers' responses to high transaction costs. Diversity in insurance products among types of firms and their coverage complicates comparisons of relative economic efficiency. The traditional health insurance product provided both risk transfer and claims and information services as a package; these naturally carried a relatively steep price. Over time, the trend among mid-size and large employers has been to purchase less insurance (the pure risk-transfer product) and more services (information, adjudication, and managed care products). Although insurance firms still sell the bundled services to smaller employers, a range of risk bearing and information services has evolved in the market for mid-size and large groups.

Firms that self-insure purchase different levels of risk reduction and other information-related services than fully insured firms purchase. As discussed above, administrative costs vary depending on the precise mix of services purchased. Fully self-insured firms (a rare phenomenon) may purchase administrative services only (often, claims processing, claims review, accounting, computing, and consulting). Some of the administrative functions are borne by the self-insuring firm (such as internal analyses), and the employer retains the risk of providing health benefits. Costs associated with these administrative functions assumed by employers (or their employees) are generally not recorded, further complicating estimates of systemwide costs. Many employers partially self-insure; they purchase stop-loss coverage, which protects an employer against expenses beyond a negotiated dollar threshold. Depending on the range of services purchased, administrative expenses for this approach range from approximately 5 to 12 percent of incurred claims (Exhibit 4). The high range includes the purchase of heavily managed services, such as point-of-service networks, currently offered by most major health plans. Whether administrative investments in these services lower costs and improve outcomes commensurately remains at issue.

Another response to high transaction costs in the delivery system is

Exhibit 4
Source Of Health Insurance And Estimated Administrative Expenses, As Percentage Of Total Spending, 1990

Source of coverage	Millions of persons	Administrative costs as percent of spending
Private[a]		
Employment-based	150	5.5%-40%
Individual	15	40%
Self-insured	-[b]	5%-12%
Prepaid, HMO [c]	35	2.5%-7%
Public		
medicare, total	34	2.1%
Part A		1.2%
Part B	33	3.5%
Medicaid	23	3.2%-11.8%[d]
No insurance	34	-[b]
Total	256	5.8%

Sources: K. Levit et al., "National Health Expenditures, 1990," *Health Care are Financing Review* (Fall 1991): 36. Total administrative costs rely on the definition of administration and net cost of insurance used by HCFA. Estimates for private plans are derived from the Congressional Research Service, *Cost and Effects of Extending Health Insurance Coverage* (Washington, D.C.: Library of Congress, October 1988). 46; and P. Feldstein, *Health Economics,* 3d ed. (New York: Wiley, 1988). 157. Administrative cost estimates for Medicare are derived from U.S. House of Representatives, Committee on Ways and Means, *Overview of Entitlement Programs, 1991 Green Book* (Washington, D.C.: U.S. GPO, 1991) 168–169. Estimates for self-insured and prepaid plans from Feldstein and statement by James Doherty, Group Health Association of America, before the Joint Economic Committee, 16 October 1901. The low estimate under "prepaid" represents administrative costs reported by Kaiser Permanente, with the 7 percent figure derived from Feldstein. The "self-insured" range includes those only offering utilization review services to the highest costs associated with adopting a heavily managed point-of-service managed care option. Totals listed under "private health insurance" are not mutually exclusive. Medicare totals include both administrative costs associated with its intermediaries and government costs allocated to administration (for example, Medicare premium tax collection).

[a] Average administrative costs are 14.2 percent of spending.
[b] Not available.
[c] HMO is health maintenance organization.
[d] Average is 5.1 percent.

the growth in prepaid (vertically integrated) firms-in particular, health maintenance organizations (HMOs). HMOs integrate both insurance and delivery functions; this potentially reduces total transaction-related and other administrative costs in the delivery system.[10] Because HMOs are both insurers and providers, administrative expenses of HMOs and other forms of insurance are not directly comparable.

On average, administrative (nonmedical) expenses in HMOs are lower (9.4 percent) relative to the average conventional plan (Exhibit 5). Administrative costs included in the comparison are marketing, enrollment, claims processing, and government compliance costs. A number of factors may reduce the administrative expenses of HMOs relative to conventional plans. First, federally qualified HMOs (approximately half of all HMOs) offer a basic benefit package, with more limited cost sharing and, relative to indemnity insurers in small groups,

Exhibit 5
Nonmedical Administrative Expenses In HMOs, 1989

Type of HMO	Administration as percent of expenses
Large HMO (100,000 or more enrollees)	8.0%
Health Insurance Plan of New York	5.0
Group Health of Puget Sound, Washington	5.1
Kaiser Permanente	2.5
"Mature" HMO (older than 16 years)	6.1
Average	9.4

Source: Statement by James F. Doherty, president, Group Health Association of America, before the Joint Economic Committee, Subcommittee on Education and Health, 16 October 1991.
Note: Average is weighted by number of enrollees in each plan. HMO is health maintenance organization.

simplified rating structures (basically, derivatives of community rating). Their dual role as insurer and provider simplifies whatever claims-processing expenses HMOs may have (in many cases, salaried arrangements, with limited claims processing, or individual billing is the norm). These characteristics may streamline costs associated with transactions, benefits management, and selling and marketing plans.

Administrative Costs In Other Sectors

Hospitals. Hospitals provide a mix of outputs, including patient care, clinical research, and education. As in the case of insurance, a variety of administrative and clinical inputs are required to produce these outputs (Exhibit 6). The level of these administrative inputs will depend on the outputs produced-that is, mix of patients and extent of clinical research and training. The same measurement issues that apply to insurance arise in identifying and comparing administrative costs within and among hospitals. For instance, data-processing activities are used for billing, serve as the basis for strategic planning and control, and are used for clinical research. Ideally, costs associated with data processing would be allocated across these outputs using the incremental average cost methods discussed previously. Thus, the efficiency in which data-processing services are produced cannot be inferred from a simple ratio of data processing to total hospital expenses.

Although some of these administrative expenses are controlled locally, many others result from broader policy decisions at the federal or state level. State all-payer rate setting, selective contracting, or hospital budgeting (as in the case of Rochester, New York) all require different levels of administrative input. Thus, public policy decisions regarding these strategies can have an impact on the level of administrative inputs

Exhibit 6
Administrative Functions And Outputs in Hospitals

Output	Administrative cost function	Examples of factors influencing level of costs
Patient care/ sales/revenue	Transaction-related Billing, accounts receivable, collections Admitting Benefit management Quality assurance Data processing Medical records and library	Type of management information system Uniformity of reimbursement system Scope and mix of services (inpatient, outpatient, long term care) Percent of bills electronically filed Tort law/malpractice experience
Clinical outcomes, research, education	Sales and marketing Strategic planning Financial control Advertising Public relations Regulatory/compliance Indemnification of board members Peer Review Organizations	Extent of market competition versus regulation Hospital ownership (public, for-profit, not-for-profit) State and federal laws

employed and on the resulting costs. Administrative costs in hospitals likely differ (especially the transaction-related and sales and marketing functions) in regulated, all-payer states with few excess beds (such as New York) compared with more competitive states (such as California). Published reports of these costs differ substantially, ranging from a national estimate of 15 percent of revenues to those observed in California of approximately 20 percent.[11]

Factors accounting for these differences, as well as how to interpret them, remain at issue. For instance, even if administrative costs differ per unit of output (total expenses adjusted for differences in output mix), the desirability of these differences would not be clear. Selective contracting and regulation are two approaches to controlling costs. Each likely imposes different administrative costs on hospitals, but they achieve similar reductions in hospital cost growth.[12] Using this narrow criterion, higher administrative expenses in the example of selective contracting are not necessarily inefficiently employed; they generate aggregate cost savings. The more important underlying issue is the patient care services that these inputs purchase.

Physicians' offices. The four categories of administrative expenses also exist in physicians' offices (Exhibit 7). As is the case in hospitals (and other facilities such as nursing homes and ambulatory care centers), these inputs are required to collect revenues and also serve as the basis for clinical research. With respect to the transaction function, physi-

Exhibit 7
Administrative Functions And Outputs in Physicians' Offices

output	Administrative cost function	Examples of factors influencing level of costs
Patient care/ sales/revenue	Transaction-related Billing Collections	Patient mix (insured versus uninsured) Electronic, paper billing Percent of business fee-for-service Diversity of insurance plans Total office visits Salaried versus fee-for-service
Clinical outcomes, research	Benefits management Utilization review Sales and marketing Advertising Regulatory/compliance Audits Reporting requirements	Proportion of patients with managed care Solo versus group practice (prepaid) Physician location Percent, number of Medicare, Medicaid patients

cians' offices must initially determine insurance eligibility, translate physician work onto billing forms, bill the patient or insurance firm, and follow up on collecting payment. These functions may he performed by in-house clerical and billing staff, or the physician may contract with an outside billing service.

Studies examining office-based physician practice cost by function estimate that nonphysician labor (billing clerks, clerical workers, registered and licensed practical nurses, and health technicians) accounts for 15.7 percent of practice costs for a typical office (Exhibit 8); this amount could reach as high as $26 billion in 1992. At issue is the portion of time spent by billing clerks (clearly a subset of this total) on billing and collections. Moreover, very little is known about the level of administrative costs in solo versus group practice. Which organizational form uses administrative costs (or other inputs such as aides, for that matter) more

Exhibit 8
Physician Practice Functions, As Percentage Of Practice Costs, 1987

Function	Percent of practice costs
Physician work, net income	54.2%
Employee wages (clerical workers, registered nurses, licensed practical nurses, health technicians)	15.7
Office rent	11.1
Medical equipment and supplies	13.4
Malpractice	5.6

Source: *Federal Register,* 4 September 1990, 36189.

efficiently?

Physicians also are required to interact with third parties regarding the appropriateness and medical necessity of a particular service or procedure. In certain cases, the physician him or herself must receive prior approval for a specified intervention. Case-by-case interventions typical of many managed care protocols impose substantial time costs on physicians and other providers.

Unmeasured expenses. Employers and individuals also incur expenses when interacting with the health care delivery system. These expenses are generally not quantified and therefore are not included in estimates of total administrative spending. Small employers, for instance, incur transaction-related expenses by maintaining employee rosters to submit to their insurer, who charges premiums based on number of employees. This activity requires time spent by both the worker and the employer. Larger firms incur similar expenses, although they generally report aggregate changes in employment (and mix of dependents) each month. In both cases, however, additional transaction costs are assumed by the employer.

Individuals also incur costs; these include time spent filing claims forms, monitoring actual expenses relative to their deductible, and submitting the claims form. The extent of these expenses depends largely on the type of health plan selected; many prepaid plans minimize these transaction costs (perhaps at a cost of some provider choice), while others impose large time costs on individuals (perhaps with the benefit of more provider choice). In either case, the time and effort costs do not appear on administrative cost reports.

Policy Implications

In this paper, I had five objectives: (1) to identify the general administrative functions within our health care delivery system; (2) to suggest a method to decompose total administrative costs; (3) to discuss measurement issues; (4) to provide a framework for comparing administrative costs across health plans; and (5) to identify opportunities for future research. A number of cross-cutting observations have emerged concerning administrative costs; in particular, comparisons across health insurers, hospitals, physicians' offices, and other institutional providers are complicated. It is not clear whether a high ratio of administrative to total expenses should be cheered or jeered; this is also evident in the lack of consensus on administrative costs in the literature.

Despite the caveats presented above, I believe that administrative costs in our delivery system could be reduced. The typology that I have

outlined provides a framework to distinguish among administrative functions that are amenable to change and those where reductions could actually increase total spending. Many transaction-related expenses could be streamlined if a universal health insurance program were adopted. In particular, organizing insurance around large groups-in the extreme, a single payer-could produce the single largest reduction in systemwide administration. Continued growth in prepaid group practices and standardized electronic billing and claims filing in the fee-for-service sector would yield additional reductions.[13]

Difficulties abound in comparing administrative costs within the U.S. health care system. How much more complex, then, are the trade-offs and measurement issues implicit in comparing administrative spending among nations. Relative to those in the United States, administrative costs in Canada are low. Part of the lower costs in Canada are traced to its universal single-payer system and the use of global hospital budgets. Yet, in addition to its pure transaction-related functions, administrative systems in the United States have broader objectives than does the Canadian system. Canada does not produce the billing and clinical data used in the United States to reimburse providers, for medical education, and for clinical and health services research. Americans have invested heavily in managed care information and data-processing systems, which add to administrative costs but are widely thought to reduce health care spending. These investments provide both clinical and financial information used for total quality management and research on patient outcomes and quality. Whether these administrative investments produce commensurate benefits should be the subject of further research that examines both the benefits and the economic costs.

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NOTES

1. See S. Woolhandler and D. Himmelstein, "The Deteriorating Administrative Efficiency of the U.S. Health Care System," *The New England Journal of Medicine* (2 May 1991): 1253–1258; and U.S. General Accounting Office, *Canadian Health Insurance: Lessons for the United States,* GAO/HRD-91-90 (Washington, D.C.: US. Government Printing Office, June 1991).
2. See R.D. Blair and R.J. Vogel, *The Cost of Health Insurance Administration* (Lexington, Mass.: Lexington Books, 1975); and P. Danzon, "Hidden Overhead Costs: Is Canada's System Really Less Expensive?" *Health Affairs* (Spring 1992): 21–43.

3. For further discussion on this point, contact the author at Department of Health Policy and Administration, School of Public Health, University of North Carolina, Chapel Hill, North Carolina 27599-7400.
4. A. Dixit and J. Stiglitz, "Monopolistic Competition and Optimum Product Diversity," *American Economic Review* (June 1977): 297–308.
5. Data from U.S. Department of Commerce, Statistical Abstract of the United States, 1991 (Washington, D.C.: U.S. GPO, 1992); and Harry Sutton, R.W. Morey, Inc., personal communication, February 1992.
6. W.G. Manning et al., "Health Insurance and the Demand for Medical Care," *American Economic Review* (June 1987): 251–277.
7. Early studies attempted such comparisons by standardizing insurance functions and using multivariate analyses. See W. Hsiao, "Public vs. Private Administration of Health Insurance: A Study in Relative Economic Efficiency," *Inquiry* (December 1978): 379–387. Hsiao concluded that government provision of insurance through competition (such as the Federal Employees Health Benefits Program) was more efficient than reliance on a single designated carrier, as in the Medicare program.
8. Although economies of scale exist at current processing levels, the shape of the long-run average cost curve at higher levels of output remains uncertain (that is, whether diseconomies of scale are present). Economies of scale in processing claims have been found within both nonprofit (Blue Cross) firms and commercial carriers. I use the term "health insurer" to include both types of health plans, recognizing that Blue Cross is not defined as an insurance carrier. See K.W. Adamache and F.A. Sloan, "Competition between Non-Profit and For-Profit Health Insurers," *Journal of Health Economics* (December 1983): 225–244.
9. Lewin-ICF, "Analysis of Alternative Proposals to Extend Health Insurance to Persons Who Lack Coverage" (Report prepared for the Office of Research, Health Care Financing Administration, October 1989).
10. B. Klein, W. Crawford, and A. Alchian, "Vertical Integration, Appropriable Rents, and the Competitive Contracting Process," *Journal of Law and Economics* (October 1978): 297–326.
11. The GAO's direct comparison of administrative functions estimated that administration accounted for 15 percent of total revenues in U.S. hospitals and 9 percent in Canada. U.S. GAO, *Canadian Health Insurance: Lessons for the United States, 66*.
12. K.E. Thorpe and C.E. Phelps, "Regulatory Intensity and Hospital Cost Growth," Journal of Health *Economics* (September 1990): 143–166; and J. Zwanziger and G. Melnick, "The Effects of Hospital Competition and the Medicare PPS Program on Hospital Cost Behavior in California, "Journal of Health Economics (December 1988): 301–320.
13. For the reasons presented throughout the paper, precise estimates of reductions in administrative costs under alternative reform proposals are shaky at best. We can, however, place an upper bound on potential reductions in insurance administration. In 1992, the net cost of private-insurance is estimated to be $37 billion (14.2 percent of $263 billion). Assume that all individuals received coverage through large groups and that all the differences in insurance loading are underwriting and marketing (which clearly they are not, since there are substantial product differences). At most, insurance loading would fall to 5.5 percent, a reduction of $22 billion. Of course, this calculation runs counter to most of the caveats I presented in the text.